BILLINGS BRIARWOOD SEWER MAIN EXTENSION

ENVIRONMENTAL ASSESSMENT

RESPONSES TO COMMENTS

February 7, 2007

PROJECT IDENTIFICATION

Name of Project: Billings Briarwood Sewer Main Extension
Applicant: City of Billings
Address: 510 North Broadway 4th Floor
Billings, MT 59101

BACKGROUND

On November 29, the City of Billings published in a newspaper of general circulation a legal notice stating that an environmental assessment (EA) and the corresponding Finding of No Significant Impact had been drafted for the city's proposed extension of a sewer main to serve the Briarwood Subdivision/South Hills area. This notice invited interested parties to review the documents and submit comments supporting or disagreeing with the Finding of No Significant Impact by no later than December 28, 2007. The EA and FONSI were available for public examination on the DEQ website (http://www.deq.mt.gov/ea.asp) and during normal working hours at the following locations:

Dept. of Environmental Quality Helena, Montana	City of Billings Department of Public Works Missoula, Montana

The notice invited comments supporting or disagreeing with either FONSI or EA to be considered by each agency. A thirty (30) day comment period followed the date of the notice. Once all comments were considered and addressed, the DEQ and EPA were to make a final determination.

Several comments were received from two individuals. Below are each commenter's concerns (verbatim) and the Department of Environmental Quality's (DEQ) responses.

The purpose of the environmental assessment was to evaluate the impacts on the human environment that may result from the proposed project. Typically, the EA should describe and disclose the impacts of the project for the proposed action, evaluate reasonable alternatives, and if any are necessary, mitigation measures. An EA was determined to be the appropriate level of analysis to determine the significance of impacts associated with the project. Moreover, the impacts from development that may occur in the area regardless of whether the proposed project (sewer main extension) is constructed have not been analyzed in detail in the environmental assessment.

COMMENTS AND DEQ RESPONSES

General Response: The DEQ feels that many of the comments received (9 of 15 comments) are related to issues associated with growth and future development in the project area. Based on history and present growth rates, it is important to bear in mind that growth and development is likely to occur in the project area, regardless of whether the sewer main is extended into the area. However, a higher population density should be expected in some areas because the sewer main (collection system) would allow homes to be placed closer together. This higher density should be considered when a project of this nature is being constructed and we assume this is the basis of the comments.

The higher density in some areas would be considered a “secondary” impact” to the construction of the sewer main. This secondary impact is uncertain and cannot be directly addressed in the EA because the local property owners control whether they divide their property. However, there are city, county, and state regulations in-place, including; zoning regulations, comprehensive planning, and subdivision laws, that control the density and development (sanitation facilities, water supply, sewage disposal, solid waste disposal and storm drainage system). The density will be controlled to some extent by these regulations, when and if the property owners divide their property. Therefore, because the proposed project is to serve the Briarwood Subdivision, which is an existing developed area located in the City of Billings, growth and development are not directly related to the immediate need to construct the sewer main. In addition to undeveloped property that could be developed, there are several existing moderately dense subdivisions in the project area that may require sewer (and water) service in the future.

The environmental benefit of connecting homes currently on septic systems and future homes that would be on septic systems to a treatment system such the Billings system would appear to be beneficial to protection of groundwater quality. The projected population of 12,000 people discussed in the EA is for the 50-year planning horizon. A growth rate of 3-5 percent per year is a reasonable projected growth rate based on current rates.

Comment One: *The sewer line placement is not in the existing ROW forcing 11 property owners to agree to an easement or face condemnation proceedings. It was my understanding that the original plan was to have the sewer line parallel the water line in the existing ROW along the highway. This plan has gotten convoluted in the process of the City's attempt to include a bike/pedestrian trail along with the sewer line placement. This has been a blatant disrespect of property rights and has been a very contentious issue for the Blue Creek residents who reside in the county. It is my belief that the City of Billings has been uncooperative in their attempt to negotiate a fair easement with the affected property owners in order to condemn the property and then carry on with their intentions of combining a bike/pedestrian trail in conjunction with the sewer line. I have documentation to support this allegation.*

Response: The July 2005 Design Study (Reference 1 in EA) did evaluate a route along the highway but this route was eliminated from further consideration due to hydraulic constraints of gravity sewer caused by the elevation differences from the existing treatment plant, utility congestion in the highway right-of-way (ROW), and the inability to easily connect future users. The highway department (MDT) officials indicated a strong preference not to use the highway ROW for the sewer main route. Consideration to include bike/pedestrian trail on the sewer main easement was considered early in the planning process, but is not an option being considered at this time due to public concerns (made during the October 18, 2005 public meeting). Negotiation of easements is outside the scope of this environmental review.

Comment Two: *One section of property affected by the sewer line placement (Atchison's) consists of an approximately 60 foot swath. If trees, brush, etc. is removed upstream, this leaves the potential for worse flood conditions than if the riparian environment is left in its natural condition. It is in a 100 year flood plain*.

Response: In the upper portion of the proposed sewer main, the sewer main crosses private properties for approximately 4,500 feet. A 60-foot wide construction easement is being obtained from the property owners to allow construction and a 20-foot wide permanent easement for continued maintenance and repair of the sewer main.

Based on information scaled from the plans, the sewer main crosses the Atchison's property a distance of approximately 1,200 feet (approximate project stations 30+50 to 42+50). To provide an idea of the proximity of Blue Creek to the proposed sewer main, please consider the following information: On the Atchison's property, Blue Creek is within 100 feet of the proposed sewer main from approximate project stations 31+00 to 33+00 (200 feet) and from project stations 38+00 to 42+20 (420 feet). From this information, the estimated area to be disturbed within 100-feet of Blue Creek (on the Atchison property) would be 62,000 square feet (1.4 acres). Moreover, Blue Creek is within 30 feet (adjacent to the edge of the 30-foot wide construction easement) of the proposed sewer main at project station 32+45 and at approximate project stations 39+50 to 41+50 (approximately 200 feet). Typically, when construction is within 30 feet of the creek the contractor will have to be very cautious not to allow the erosion of disturbed soils to run into the creek. Proper erosion control material such as silt fence, waddles, and/or straw bale barriers should be adequate and have proved to be effective on similar projects for erosion control. When the creek is more than 30 feet from the construction area, natural grass barriers will provide additional protection as the grasses would filter soil-laden water that might flow from the construction site. Requirements and details are included in the project specifications that the contractor use best management practices (BMP) for erosion control on this project.

A 60-foot wide swath should be the maximum width that construction can directly impact. Because of the construction permits the City and contractor will be required to obtain, the cleared area must be kept to the minimum area (width) necessary for construction. Depending on site

characteristics (vegetation, ground slope, soils, stream banks, etc), clearing and grubbing of the total easement width of 60-feet should not occur at all locations. All disturbed areas will be restored with natural vegetation per the site conditions prior to construction. Natural drainages and flow paths will be re-established to pre existing conditions. Temporary storm water management controls will be used for erosion and/or sediment control during construction. Temporary erosion control measures may include; silt fences, waddles, straw bale barriers, etc. Several permits from regulating authorities will be required for the sewer main construction when near Blue Creek. Required permits may include: Storm Water Pollution Prevention Plan (includes construction dewatering discharge permit) issued by the DEQ, a SPA 124 Permit issued by the Department of Fish, Wildlife and Parks, a Nationwide 404 Permit and/or Nationwide 12 Permit issued by the US Army Corps of Engineers for work in streams and wetlands; and a 318 Authorization (short-tern water quality standards for turbidity), which will be issued by the DEQ.

Blue Creek most likely has a floodplain, streambed, streambanks, and possibly some small wetlands. At some locations, the proposed project will most likely impact these features during construction. The Corp of Engineers Nationwide Permit will regulate the construction activities of the sewer main when they are associated with excavation, backfill, or bedding in all waters of the United States and where the work impact wetlands. Based on the above information, the requirements of these permits should protect the natural environment of Blue Creek during and after construction, and therefore the environmental impact related to erosion and flooding appears to be non-significant.

Comment Three: *The amount of projected population will put stress on the school system – it is already operating beyond capacity.*

Response: This project is not to promote growth, but to construct a sewer main from the existing Briarwood Wastewater Treatment Facility (City owned) to the City of Billings wastewater system. The existing Briarwood Wastewater Treatment Facility is in poor condition and is near, or at its capacity to treat the sewage produced by the residents of the Briarwood Subdivision. The impact of this project on the school system is somewhat nonrelevant to the environmental consequences of this project because the development of this area will most likely occur regardless of whether the sewer main is extended into this area. However, as discussed in the General Response on page one; there will most likely be an increase in population density in some locations because the sewer main will allow homes to be constructed closer together. The City is planning for growth now (City policy for “Smart Growth”) by establishing the area the sewer main can serve (service area) and estimating the future population for the 50-year planning period. The growth will be to some extent controlled by the zoning and subdivision processes. Yellowstone County and the City of Billings should have adequate time and resources to make the necessary adjustments to accommodate the increased population which will occur in this area as a result of the benefits of the sewer main. Therefore, it is expected that impacts to the environmental resources due to the sewer main will be minor.

The proposed location of the sewer main is generally low in the valley (near or parallel to Blue Creek in some locations). Other sewer mains can be connected utilizing gravity flow later. Therefore, the sewer main has been oversized to serve more than the Briarwood Subdivision. The area that could contribute wastewater to the proposed sewer main (service area) was defined for planning purposes to size the sewer main in the event existing and future homes connect to the City wastewater system. The service area was determined to be 2,955 acres in size. The Cedar Park Subdivision is in the service area and homes in this subdivision could be connected to the proposed sewer main. This subdivision is already within the City limits and has some on-site septic systems that are reported to be failing. The Cedar Park Subdivision has about 85 homes utilizing on-site septic systems to treat wastewater. However, as noted in the EA, no homes other

than the Briarwood Subdivision are scheduled to connect at this time.

The stress on the schools expected from the sewer main construction was not evaluated, as all the expected growth should not occur as a direct result of the proposed sewer main. Moreover, the growth should occur at such a rate that the City will have time to plan the growth.

Comment Four: *Increased traffic increases fatalities*.

Response: We assume this comment is related to traffic impacts due to the increase in population density which could occur in this area due to the sewer main, and not directly related to the construction of the sewer main or the population increase that may occur regardless of whether the sewer main is constructed. The City of Billings expects development to occur in this area, regardless of whether the sewer main is extended into the area. However, the planning/zoning, subdivision and/or traffic divisions from either Yellowstone County or the City of Billings will regulate the development of this area and therefore the impact of an increase in population (and traffic) due to the sewer main is nonrelevant to the environmental consequences of this project. See our response to Comment Three which discusses the population density increases due to the sewer line.

Comment Five: *Wildlife is adversely affected in a number of ways.*

Response: We assume this comment is related to impacts on wildlife due to the increase in population density which could occur in this area due to the sewer main, and not directly related to the construction of the sewer main or the population increase that may occur regardless of the whether the sewer main is constructed. The City of Billings expects growth to occur in this area regardless of whether the sewer main is extended into the area. However, the planning/zoning, subdivision, and/or traffic divisions from either Yellowstone County or the City of Billings will regulate the development of this area and therefore the impact of an increase in population due to the sewer main on wildlife is nonrelevant to the environmental consequences of this project. See our response to Comment Three which discusses the population density increases due to the sewer line.

Comment Six: *Livestock issues with rural residents and city residents – dogs, kids, complaints, etc.*

Response: We assume this comment is related to impacts to livestock and residents due to the increase in population that could occur in this area due to the sewer main, and not directly related to the construction of the sewer main or the population increase that may occur regardless of whether the sewer main is constructed. The City of Billings expects development to occur in this area regardless of whether the sewer main is extended into the area. However, the planning/zoning, subdivision, and/or traffic divisions from either Yellowstone County or the City of Billings will regulate the development of this area and therefore the impact of an increase in population due to the sewer main on livestock is nonrelevant to the environmental consequences of this project. See our response to Comment Three which discusses the population density increases due to the sewer line.

Comment Seven: *Forced annexations are a blatant abuse of property rights. Individuals will be taxed out of their homes thus causing damage to the economy. Urban sprawl or leapfrogging with annexations puts a tremendous economic burden on city residents. The city cannot recoup the amount of money it costs to bring services so far out of the city limits. Police, fire emergency services cannot keep up, thus leading to more mill levies and yet higher taxes.*

Response: The City of Billings cannot force annexations. If the residents vote and obtain

approval to be annexed into the City, then they will be responsible for the costs (through taxes) to extend the services to their homes. Therefore, the City would most likely not put the tax burden on other city residents. State and City annexation laws require a majority vote (51%) per State and City regulations. The City has a policy on annexations which can be reviewed at the City offices or on their web site.

Comment Eight: *The composition of the soil (ie. bentonite clay) is not conducive to building houses. A geographical study has been done and it is in black and white that it is not safe to build and yet the city is encouraging growth in this area by bringing water and sewer out.*

I strongly disagree that an Environmental Impact Study is not necessary. Not only do I believe an Environmental Impact Study is crucial, I believe someone needs to put a halt to this kind of abuse of property rights, waste of tax money, and total disregard of the general population's safety and quality of life.

Response: The question of whether soils in the area are favorable to the construction of homes is nonrelevant to the environmental consequences of this project. The proposed project is to serve the Briarwood Subdivision, an existing developed area located in the City of Billings. Growth and development are not directly related to the immediate need to construct the sewer main. The City of Billings expects that development will occur in this area and homes will be constructed regardless of whether the sewer main is extended into the area. We do not know if bentonite clay soils are safe to build homes on, but clay soils are not effective soils for on-site subsurface wastewater treatment systems. Therefore, the City wastewater treatment system (extension of the proposed sewer main to serve the homes) would provide a more effective method for wastewater disposal from the homes than on-site wastewater treatment systems.

Comment Nine: *The proposed sewer line placement does not follow the existing water line, but differs from the route which was originally presented to DEQ. It will now include a portion paralleling Blue Creek. Given that the City has requested 20 foot permanent easement flanked on either side by 20 foot construction easements, this would imply that the utilization of these easements during construction will result in a 60 foot swath laid bare of the trees and brush which protect the stream bank from erosion. The banks of Blue Creek are comprised of easily erodible soils. Erosion could easily result, either from flood waters from within the channel, or from drainage from the lands abutting the creek. The old growth cottonwoods are especially important in preventing erosion and the protection that these trees supply will be impossible to replace.*

Response: The preliminary engineering report (PER) evaluated seven alternative routes between the Briarwood wastewater treatment facility and the Yellowstone River, but determined that only two routes were feasible (practical, technically possible, and economically feasible). Both of the feasible routes included about 4,500 feet of sewer main which would generally parallel Blue Creek in the section between the Briarwood wastewater treatment facility and Colleen Drive. The difference between the two routes occur in the location of the sewer pipe between Colleen Drive and Blue Creek highway. With the recommended route, at Colleen Drive, the sewer line would angle west (away from Blue Creek) and continue to the highway, following the Colleen Drive right-of-way. At the highway, the sewer main would continue north to the proposed lift station, paralleling the water line to the proposed lift station. The other route evaluated did not angle the sewer main away from Blue Creek at Colleen Drive, but included the line paralleling Blue Creek to where Blue Creek crosses under the highway. This route would have included approximately 3,000 feet more sewer main (construction) along Blue Creek. Therefore, the proposed route has the potential for less impact to Blue Creek. The preliminary plans show that up to twelve trees, shrubs, and/or bushes may be removed during construction on the Atchison and Golf Course properties. The age of this vegetation is unknown. The trees and brush is sparse and does not

appear to not provide cover to a significant portion of the construction area. Areas disturbed by the construction will be reseeded and erosion control materials will be placed to prevent erosion. Please refer to the potential impacts to Blue Creek due to erosion and the construction in the easements that were discussed in Response Two..

Comment Ten: *The City has included in this notice the future annexation of properties to be served by this sewer. The overall density of residences in a large portion of the area is well under four per acre and in fact may be closer to one residence per four acres. These open areas have resulted in a habitat which supports a great variety of wildlife especially avain. On my property alone, I have seen everything from mink and bats to bald eagles. The present City policy supports "Smart Growth" which calls for high density housing with commercial districts in close proximity of these residences. The overall result will be the destruction of a unique ecosystem. Blue Creek Road will become the equivalent of Main Street in the Billings Heights. At the very least, in order to prevent the destruction of any endangered species, an inventory of the area's flora and fauna should be taken.*

Response: The proposed project is to serve the Briarwood Subdivision, an existing developed area located in the City of Billings, growth and development are not directly related to the immediate need to construct the sewer main. The intent of defining a Service Area (Figure 1 of the EA) was not to show, or serve notice that the area would be annexed into the City of Billings. The intent of defining a service area was to estimate a contributing area to size the sewer main (for the 50-year planning period). A defined service area is necessary to estimate the future population. The population was estimated by assuming a density of 1.6 homes per acre and 2.53 people per home. Yellowstone County and/or City of Billings zoning regulations would regulate actual home density as the area is developed. The objective in the preliminary engineering report (PER) and EA was not to imply that this area would be forced to annex into the City, but to only show the possible service area. If existing homes or future homes wish to connect to the City system, they would be required to annex into the City.

Although there may be some short term impacts such as an increase in truck traffic and noise during construction of the sewer main, once the sewer main is in-place and the disturbed surface has been restored (as required by the City/contract documents), the impacts to the ecosystem in the area should be minimal. The US Fish and Wildlife Service determined that no federally-listed species or designated critical habitat occurs in the project area. The DEQ also feel that short term impacts to the ecosystem will be minimal due to the construction of the sewer main. As discussed in several responses above, the development in this area will be regulated by Yellowstone County and/or the City of Billings, and growth in the area is nonrelevant to the environmental issues of this project.

Comment Eleven: *The proposed sewer route includes the crossing of the Yellowstone by attaching sewer lines to the Yellowstone Bridge. In the event, that the line was damaged, either by natural forces or human activity, the result would be serious pollution damage to the river. As I recall, an ice jam on the Yellowstone at Columbus actually lifted the bridge off of it's support pillars. That this would happen in Billings may be a remote possibility, but, I can also see that in the event of an ice jam, that it would be nearly impossible to find anyone who would risk the liability of placing an explosive charge, which could result in the breach of a sewer line. Perhaps, if the City can afford to protect the grass of a golf course by utilizing horizontal boring they could also afford to protect the Yellowstone River by doing the same at the river crossing.*

Response: The possibility that the bridge will be damaged appears to be quite low. Moreover, the flow of sewage in the section of piping to be attached to the bridge will be controlled at the

pump station, which will be located on the south side of the river. If damage (which appears to be very remote) might occur to the bridge, the flow of sewage can be controlled by shutting the lift station down. Once the lift station has been shutdown, a minimal amount of sewage will remain in the piping. Two methods for borings under the river were evaluated in the preliminary engineering report (PER) and were discussed in the EA (Alternative 8 and 9). These alternatives were not considered feasible due to the high risks involved in doing the borings, which included pushing the technology limits of directional drilling or microtunneling due to the size of the casing pipes (and the length of the crossing of the Yellowstone River at this location). The cost of using either of these technologies was not considered in the feasibility. Concerns with the drilling under the river included losing drilling fluid, hitting large obstructions, line and grade deviation (tracking), collapse of the bore hole, and failure of the downhole tool. Attaching utility lines to bridges is a common practice and has not been a problem at current installations.

Comment Twelve: *The soils in the Blue Creek area are predominantly shale and bentonite bearing clays. The hills are somewhat protected by native vegetation. In the course of home construction, that vegetation has typically been stripped away and replaced by non native grass, which will only survive when regularly watered. Given that water is an increasingly valued resource, what steps will the City take to insure that this resource will not be wasted? Will fertilizers and pesticides prove a detriment to Blue Creek and ultimately the Yellowstone? I find it ironic that the US Geological Survey designates the hills in the Blue Creek area as not recommended for construction of residences or roads yet the City of Billings is pressing forward with rapid development.*

Response: Growth and development will be regulated by Yellowstone County and/or the City of Billings. The City expects growth to occur in this area regardless of whether the sewer line is extended into the area. Therefore, the impact on Blue Creek and the Yellowstone River from growth/development in the Blue Creek is nonrelevant to the construction of the sewer main. Water usage and fertilizer/pesticide should be regulated by the City and/or County. Please see the Response to Comment Three.

Comment Thirteen: *While the City has given the impression that the residents of the Blue Creek are "generally supportive of this alternative", it should be known that the land owners from whom the City seeks easements are by a large majority in favor of the sewer following the existing highway right of way, parallel to the water line, and leaving their lands untouched. Furthermore, on several occasions I have heard residents of Briarwood ask that the City retain the rural nature of the area.*

Response: See Response to Comment One regarding the route along the highway. The rural nature of the area will most likely only remain if the residents do not subdivide their properties. If they do subdivide their properties, then they could include subdivision agreements (covenants) that may retain the rural nature of the area. Moreover, the proposed project is to serve the Briarwood Subdivision, an existing developed area located in the City of Billings. Growth and development are not directly related to the immediate need to construct the sewer main.

DETERMINATION:

After evaluating the comments received and the responses prepared, the DEQ has concluded that this project does not require the preparation of an Environmental Impact Statement as the anticipated impacts will not be significant. Reasonable alternatives for the proposed sewer extension were analyzed as required. Although the proposed sewer main has been sized to accommodate existing

homes and future growth in the area, the sewer main is not intended to promote growth. Growth is expected in the area regardless of whether the sewer main is constructed. The sewer main will provide higher home density in some areas, but the sewer main will provide an environmental benefit if homes are connected to the sewer main instead of using individual on-site wastewater disposal systems. The City of Billings will regulate the growth in areas wishing to be connected to the sewer main because these areas must be annexed into the City. The City has subdivision, planning, and zoning codes to regulate the growth, which should allow "Smart Growth" per the City regulations and policies. The impacts from development that may occur in the area regardless of whether the sewer main is constructed have not been analyzed in detail in the environmental assessment.

Prepared By:

_____ _____

Jerry Paddock, P.E. Date
DEQ

Approved By:

_____ _____

Todd Teegarden, P.E., TFA Bureau Chief Date
DEQ